IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:	
Raymond Joseph Elisabeth Habets	
Serial No.: 10/597,146	Group Art Unit: 2624
Filed: July 13, 2006	Examiner: Nancy Bitar
For: METHOD AND APPARATUS PROVIDING FLEXIBLE MEASUREMENT FUNCTIONALITY FOR MEDICAL IMAGES	**Board of Patent Appeals and Interferences**
Confirmation No.: 6749	

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APPEAL BRIEF UNDER 37 C.F.R. § 41.37

In support of the Notice of Appeal filed on September 21, 2010, and pursuant to 37 C.F.R. § 41.37, Appellant presents this Appeal Brief in the above-captioned application.

This is an appeal to the Board of Patent Appeals and Interferences from the Examiner's final rejection of claims 1-6, 9, 12-14 and 16-18 in the Final Office Action dated June 25, 2010 as clarified by the Advisory Action dated September 1, 2010. The appealed claims are set forth in the attached Claims Appendix.

1. Real Party in Interest

This application is assigned to Koninklijke Philips Electronics N.V., the real party in interest.

2. Related Appeals and Interferences

There are no other appeals or interferences that would directly affect, be directly affected, or have a bearing on the instant appeal.

3. Status of the Claims

Claims 1-6, 9, 12-14 and 16-18 have been rejected in the Final Office Action. Claims 7, 10, and 11 have been cancelled. Claim 15 has been objected to as including allowable subject matter, but depends from a rejected claim. The final rejection of claims 1-6, 9, 12-14 and 16-18 is being appealed.

4. Status of Amendments

All amendments submitted by Appellant have been entered.

5. Summary of Claimed Subject Matter

The present invention, as recited in independent claim 1, relates to a method of processing user interaction in a medical environment with a medical image (104) for producing measurement data related to graphics (105) on the medical image (104). (*See Specification*, p. 2, ll. 25-31, Fig. 10). The method includes attaching a dynamic measurement object (42, 52, 61) to a first graphic object (105) displayed on a monitor (10, 103). (*Id.* at p. 6, l. 27 – p. 7, l. 2, Figs. 4A, 5A, 6A, 7A, 8A). The dynamic measurement object (42, 52, 61) includes measurement data related to the first graphic object. (*Id.*). The method also includes detaching, via a user interface device, the

dynamic measurement object (42, 52, 61) from the first graphic object and attaching, via the user interface device, the dynamic measurement object (42, 52, 61) to a second graphic object displayed on the monitor. (*Id.* at p. 7, ll. 3-28, Figs. 4B, 5B, 6B, 7B, 8B). The measurement data is modified to be related to the second graphic object. (*Id.*).

6. Grounds of Rejection to be Reviewed on Appeal

I. Whether claims 1-6, 9, 12-14 and 16-18 are unpatentable under 35 U.S.C. § 103(a) over European Published App. No. EP 1,349,098 to Piet at al. (hereinafter "Piet") in view of U.S. Published App. No. 2002/0067340 to Van Liere (hereinafter "Van Liere").

7. Argument

I. The Rejection of Claims 1-6, 9, 12-14 and 16-18 Under 35 U.S.C. § 103(a) Should Be Reversed.

A. The Examiner's Rejection

In the Final Office Action, the Examiner rejected claims 1-6, 9, 12-14 and 16-18 under 35 U.S.C. § 103(a) as unpatentable over Piet in view of Van Liere. (*See 6/25/10 Office Action*, pp. 2-7). The Examiner affirms this rejection in the Advisory Action. (*See 9/1/10 Advisory Action*, p. 2).

In the Final Office Action, the Examiner asserts that Piet discloses *attaching a dynamic measurement object to a first graphic object displayed on a monitor, the dynamic measurement object including measurement data related to the first graphic object.* (*See 6/25/10 Office Action*, p. 4). The Examiner correctly acknowledges that Piet fails to disclose *detaching, via a user interface device, the dynamic measurement object from the first graphic object; and attaching, via the user interface device, the dynamic measurement object to a second graphic object displayed on the monitor, wherein the measurement data is modified to be related to the second graphic object.* To cure this deficiency, the Examiner relies on Van Liere. (*Id.* at p. 5). The Examiner has repeated

verbatim the contentions in the Final Office Action ("Response to Arguments" page 3) in the Advisory Action (page 2).

B. Piet And Van Liere Do Not Disclose Or Suggest Attaching A Dynamic Measurement Object To A First Graphic Object Displayed On A Monitor, The Dynamic Measurement Object Including Measurement Data Related To The First Graphic Object; Detaching, Via A User Interface Device, The Dynamic Measurement Object From The First Graphic Object; And Attaching, Via The User Interface Device, The Dynamic Measurement Object To A Second Graphic Object Displayed On Thc Monitor, Wherein The Measurement Data Is Modified To Be Related To The Second Graphic Object

Claim 1 recites "[a] method of processing user interaction in a medical environment with a medical image for producing measurement data related to graphics on the medical image, the method comprising: *attaching a dynamic measurement object to a first graphic object displayed on a monitor, the dynamic measurement object including measurement data related to the first graphic object; detaching, via a user interface device, the dynamic measurement object from the first graphic object; and attaching, via the user interface device, the dynamic measurement object to a second graphic object displayed on the monitor, wherein the measurement data is modified to be related to the second graphic object.*"

Piet discloses three windows: a template window, an image window, and a measurement window. (*See Piet*, Fig. 2). Points from template window "are placed manually in the image by cursor clicks." (*Id.* at ¶ [0097], Figs. 1-4). The template window "graphically depicts the special relationship between anatomical features and measurement objects." (*Id.* at ¶ [0045], Figs. 1-4). The template window also serves to impose "the placement order by highlighting each point in sequence (e.g. by blinking the point in the template)." (*Id.* at ¶ [0097], Figs. 1-4). Piet also discloses an automated placement that carries out this function. (Id. at ¶¶ [0107]-[0109]). However, in either case, "[m]easurment values may be displayed either discretely or continuously in the

measurement values window as the user moves the position of a point over the image." (Id. at ¶ [0116], Figs. 1-4).

In contrast, claim 1 recites "attaching a dynamic measurement object to a first graphic object... the dynamic measurement object including measurement data related to the first graphic object." The same dynamic measurement object is later detached from the first graphics object and attached to "a second graphic object...wherein the measurement data is modified to be related to the second graphic object." For example, if the dynamic measurement object is attached to a line, it will display the measurement data relating to that line (e.g. length = 3 in.). If that same dynamic measurement object is detached from the line and attached to a different line, the dynamic measurement object will display the measurement data relating to the second line (e.g. length = 5 in). The Examiner refers to Piet's disclosure of an embodiment in which "all user-requested measurement points are *mapped* prior to generating the measurement objects that depend on them." (*Id.* at ¶ [0062]). Subsequently, the user must drag the digital sketch on which the object is generated to the actual image. It is not until the user drags the sketch to the actual image that "the result of the measurement operators is computed." (*Id.*). The measurements for the points are not calculated in the digital sketch. So, Piet only attaches the measurement points once and the measurement operators are calculated once. They are never moved to another object in which the measurement operators are computed again for the second object.

There is no detachment of any points in Piet and placement of those points at a second position. The Examiner realizes this deficiency and correctly acknowledges that Piet fails to disclose or suggest "attaching, via the user interface device, the dynamic measurement object to a second graphic object displayed on the monitor, wherein the measurement data is modified to be related to the second graphic object." (*See 6/25/10 Office Action*, pp. 4-5).

To cure the deficiencies of Piet, the Examiner refers to Van Liere. Specifically, the Examiner refers to paragraphs [0045]-[0055] of Van Liere and states

that "[d]etaching the dynamic measurement is taught when the first point is being displayed then removed and vice versa." (*Id.* at p. 3). However, this passage of Van Liere merely explains the different types of measurements and annotations and explains how to create them. Nowhere in this passage does Van Liere disclose or suggest that "the first point is being displayed then removed and vice versa," as stated by the Examiner in the Final Office Action. (*Id.*). The method disclosed by Van Liere consists of identifying one or more points so that a measurement (or annotation) can be created.

Van Liere discloses interaction with a computer-displayed medical image. The Examiner refers to Van Liere's disclosure of steps used to create graphics object using a "click-move-click" operation or a "press-drag-release" operation. (See Van Liere, ¶¶ [0032]-[0042]). Subsequently, Van Liere discloses point, line, angle, curve, and region-of-interest measurements. However, as stated in the originally filed application, Van Liere's measurements "are static and it is not possible to interact with these measurements, except in some cases for moving the location of the measurement label." (See Specification, ¶ [0005]). Accordingly, Van Liere also fails to disclose or suggest "attaching, via the user interface device, the dynamic measurement object to *a second graphic object displayed on the monitor, wherein the measurement data is modified to be related to the second graphic object.*"

Therefore, Appellant respectfully submits that neither Piet nor Van Liere, alone or in combination, disclose or suggest "attaching a dynamic measurement object to a first graphic...the dynamic measurement object including measurement data related to the first graphic object" and "detaching…the dynamic measurement object from the first graphic object; and attaching…the dynamic measurement object to a second graphic object…wherein the measurement data is modified to be related to the second graphic object," as recited in claim 1. Thus, it is respectfully submitted that claims 1 and its dependent claims 2-6, 9 and 16-18 are allowable.

Claims 12 and 13 recite the method of claim 1 and thus are allowable for at least the same reasons as claim 1. Claim 14 recites "a second code segment (112) for

removably attaching at least one dynamic measurement object based on said measurement data to said graphic object." Since Piet neither teaches nor suggests a removably attached dynamic measurement object, it is respectfully submitted that claim 14 is also allowable.

8. Conclusion

For the reasons set forth above, Appellant respectfully requests that the Board reverse the rejection of the claims by the Examiner under 35 U.S.C. § 103(a), and indicate that claims 1-6, 9, 12-14 and 16-18 are allowable.

Respectfully submitted,

Date: November 22, 2010

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CLAIMS APPENDIX

1. (Previously presented) A method of processing user interaction in a medical environment with a medical image for producing measurement data related to graphics on the medical image, the method comprising:

attaching a dynamic measurement object to a first graphic object displayed on a monitor, the dynamic measurement object including measurement data related to the first graphic object;

detaching, via a user interface device, the dynamic measurement object from the first graphic object; and

attaching, via the user interface device, the dynamic measurement object to a second graphic object displayed on the monitor, wherein the measurement data is modified to be related to the second graphic object.

2. (Previously presented) The method according to claim 1, wherein the user interface device is cursor controlled and the medical image and first and second graphic object is displayed on the monitor of a medical examination apparatus.

3. (Previously presented) The method according to claim 1, wherein the first and second graphic objects are ~~being~~ associated with at least one anatomical structural element of medical objects on said medical image.

4. (Previously presented) The method according to claim 1, wherein the measurement data is derived from the first and second graphic objects.

5. (Previously presented) The method according to claim 4, wherein the first and second graphic objects are a point, a line, a curve, two intersecting lines, or a contour.

6. (Previously presented) The method according to claim 4, wherein the measurement data that is derived from the first and second graphic objects is a line length, a curve length, an angle delimited by two intersecting lines, an area delimited by a contour or a

profile along a line or a curve, a diameter, a perimeter, an area, a volume, or grey value profiles.

9. (Previously presented) The method according to claim 1, wherein the attaching the dynamic measurement object to the first and second graphic objects, further comprises determining a nearest one of the first and second graphic objects supporting a specific measurement associated with the dynamic measurement object.

12. (Previously presented) A medical examination apparatus being arranged for implementing the method of claim 1, said apparatus comprising cursor display means and user interaction means for a medical image displayed on a graphics display means for displaying measurement data related to graphics objects on said image, cursor actuating means with detection means for detecting positionings and actuations thereof, and measurement means for thereupon driving control of inherent measuring functionalities as being immediately based on graphics objects relative to the actuated position with respect to graphics objects having associated imaged medical objects.

13. (Previously presented) Use of a medical examination apparatus according to claim 1 for processing user interaction in a medical environment with a medical image for producing measurement data related to graphics on the medical image, wherein the graphics on said medical image comprises at least one graphic objects, comprising removably attaching at least one dynamic measurement object to said graphic object in such a manner that the measurement object when attached to said graphic object is, upon further user interaction, removable from said graphic object, transferable along said graphic object or to another position adjacent to said graphic object, or transferable to different graphic objects on said medical image.

14. (Original) A computer-readable medium (110) having embodied thereon a computer program for processing by a computer (113) of a medical examination apparatus, the computer program comprising code segments for performing the method of claim 1, wherein the computer program comprises

a first code segment (111) for processing user interaction in a medical environment with a medical image for producing measurement data related to graphics on the medical image, wherein the medical image comprises at least one graphic object, and

a second code segment (112) for removably attaching at least one dynamic measurement object based on said measurement data to said graphic object.

15. (Previously presented) The method according to claim 1, wherein the first and second graphics objects include two intersecting lines and the dynamic measurement object attached in a first quadrant between the two intersecting lines, the measurement data being an angle between the two intersecting lines in the first quadrant, the dynamic measurement object then being detached from the first quadrant and attached in a second quadrant between the two intersecting lines, the measurement data being a further angle between the two intersecting lines in the second quadrant.

16. (Previously presented) The method according to claim 1, wherein the first and second graphics objects are contour curves.

17. (Previously presented) The method according to claim 16, wherein the measurement data included in the dynamic measurement object is a length of the contour curves.

18. (Previously presented) The method according to claim 16, wherein the measurement data included in the dynamic measurement object is a length of a line between a first point on the contour curve and a second point on the contour curves.

EVIDENCE APPENDIX

No evidence has been submitted herewith or is relied upon in the present appeal.

RELATED PROCEEDINGS APPENDIX

No decisions have been rendered regarding the present appeal or any proceedings related thereto.